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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/674,729 | 11/06/2000 | Takashi Aramaki | L9289.00111 | 3698 |

7590 02/13/2004

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EXAMINER

DUONG, DUC T

ART UNIT

PAPER NUMBER

2663

DATE MAILED: 02/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|---------------------------------|-------------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 09/674,729 | ARAMAKI ET AL. | |
| | Examiner Duc T. Duong | Art Unit 2663 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 06 November 2000.
 2a) This action is **FINAL**. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-15 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-4 and 7-15 is/are rejected.
 7) Claim(s) 5 and 6 is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ . |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 4. | 6) <input type="checkbox"/> Other: _____ . |

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1 and 3 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1 and 3, the claim defines both a method and an apparatus. The claim as a whole is neither a definition of a method nor of an apparatus but is instead a hybrid of the two; it, therefore, does not define the invention in the manner contemplated by the second sentence of 35 U.S.C. Sec. 112 (see *In re Oakley*, 1935 C.D. 198, 454 O.G. 536, 73 F.2d 934, 24 USPQ 75).

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5. Claims 1-4, 7, and 9-15 are rejected under 35 U.S.C. 102(e) as being anticipated Seo (U.S. Patent 6,581,176 B1).

Regarding to claims 1 and 14, Seo discloses an error control method comprising the steps of receiving of ARQ control information representing existence of a retransmission requirement of a packet corresponding to a sequence number (Fig. 4 col. 5 lines 63-67) including occurrence of a corresponding packet's error (Fig. 6 col. 7 lines 26-40); and retransmitting of the whole packets consisting of a packet corresponding to a sequence number instructed by said ARQ control information (Fig. 6 col. 6 lines 57-63) and packets finished transmission corresponding to numbers followed on the heels of the latest sequence number about temporal order from among sequence numbers instructed by said ARQ control information (Fig. 4 col. 6 lines 8-22).

Regarding to claims 2 and 15, Seo discloses the ARQ control information includes one sequence number (NAK Map) corresponding to a first occurrence of packet' error and bit information representing existence of retransmission requirements about sequence numbers followed on the heels of said one sequence number (Fig. 4 col. 6 lines 8-22).

Regarding to claim 3, Seo discloses a transmission-reception apparatus receiving an ARQ control information which is comprised of one inner-frame position (NAK Map) information corresponding to a first occurrence of packet's error (Fig. 4 col. 6 lines 8-11) and bit information representing existence of a retransmission requirement about position information concerning positions followed on the heels of the position corresponding to said one inner-frame position information (Fig. 4 col. 6 lines 11-22), then retransmitting a whole packets consisting of a packet corresponding to a position instructed by said ARQ control information (Fig. 6 col. 6 lines 57-63) and packets finished transmission corresponding to numbers followed on the heels of the number of the latest position about temporal order from among positions instructed by said ARQ control information (Fig. 4 col. 6 lines 8-22).

Regarding to claim 4, Seo discloses the ARQ control information includes frame numbers indicating a position of a frame (Fig. 4 col. 5 lines 63-67).

Regarding to claim 7, Seo discloses the ARQ control information is transmitted by a common channel (col. 3 lines 44-51).

Regarding to claim 9, Seo discloses transmits a plurality ARQ control information continuously (Fig. 7 col. 7 lines 4-16).

Regarding to claims 10 and 11, Seo discloses the apparatus changes the number of bit (NAK_TYPE), which configures said control information in compliance with either occurrence condition of error or line quality (Fig. 4 col. 5 lines 53-57).

Regarding to claims 12 and 13, Seo discloses a communication terminal and base station is provided (col. 1 lines 17-18).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 1-4, 7, and 9-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ejzak et al (U.S. Patent 5,444,718) in view of Seo.

Regarding to claims 1, 7, and 14, Ejzak discloses an error control method comprising the steps of receiving of status control information representing existence of a retransmission requirement of a packet corresponding to a sequence number (Fig. 3 col. 4 lines 7-26) including occurrence of a corresponding packet's error (Fig. 3 col. 4 lines 26-36); and retransmitting of the whole packets consisting of a packet corresponding to a sequence number instructed by said ARQ control information (Fig. 5 col. 5 lines 56-67 and col. 6 lines 1-17) and packets finished transmission corresponding to numbers followed on the heels of the latest sequence number about temporal order from among sequence numbers instructed by said ARQ control information (Fig. 5 col. 6 lines 17-29).

Ejzak fails to teach the status control information is one of ARQ; and the status control information is transmitted by a common channel (claim 7).

However, Seo discloses mobile radio communication system implementing an ARQ protocol; and the ARQ control information is transmitted by a common channel (col. 3 lines 44-51).

Thus, it would have been obvious to one of skilled in the art to include the ARQ communication system as taught by Seo in Ejzak to ensure a reliability of an NAK control frame transmission.

Regarding to claims 2 and 15, Ejzak discloses the status control information includes one sequence number (NR) corresponding to a first occurrence of packet' error and bit information representing existence of retransmission requirements about sequence numbers followed on the heels of said one sequence number (Fig. 3 col. 4 lines 7-36).

Regarding to claim 3, Ejzak discloses a transmission-reception apparatus receiving a status control information which is comprised of one inner-frame position (NR) information corresponding to a first occurrence of packet's error (Fig. 3 col. 4 lines 7-26) and bit information representing existence of a retransmission requirement about position information concerning positions followed on the heels of the position corresponding to said one inner-frame position information (Fig. 6 col. 4 lines 26-36), then retransmitting a whole packets consisting of a packet corresponding to a position instructed by said ARQ control information (Fig. 5 col. 5 lines 56-67 and col. 6 lines 1-17) and packets finished transmission corresponding to numbers followed on the heels of the number of the latest position about temporal order from among positions instructed by said ARQ control information (Fig. 5 col. 6 lines 17-29).

Ejzak fails to teach the status control information is one of ARQ.

However, Seo discloses mobile radio communication system implementing an ARQ protocol.

Thus, it would have been obvious to one of skilled in the art to include the ARQ communication system as taught by Seo in Ejzak to ensure a reliability of an NAK control frame transmission.

Regarding to claim 4, Ejzak discloses the status control information includes packet numbers indicating a position (sequence) of a packet (Fig. 5 col. 5 lines 40-55).

Regarding to claim 9, Ejzak discloses transmits a plurality ARQ control information continuously (col. 4 lines 7-12).

Regarding to claims 10 and 11, Ejzak discloses the apparatus changes the number of bit (bit map field), which configures said control information in compliance with either occurrence condition of error or line quality (Fig. 3 col. 4 lines 23-36).

Regarding to claims 12 and 13, Ejzak discloses a communication terminal and base station is provided (Fig. 1 col. 2 lines 11-29).

8. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Seo in view of Fukuda (U.S. Patent 5,889,790).

Regarding to claim 8, Seo discloses all the limitation with respect to claim 1, except for the same sequence number is set within prescribed data unit. However, Fukuda discloses an automatic repeat request ARQ system having a frame number (sequence number) is set within an ARQ frame (Fig. 2A col. 8 lines 1-5). Thus, it would have been obvious to one of skilled in the art to include the ARQ system as taught by Fukuda in Seo's system to makes it possible to transmit a feedback frame indicating request frame numbers in ascending/descending order.

Allowable Subject Matter

9. Claims 5 and 6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

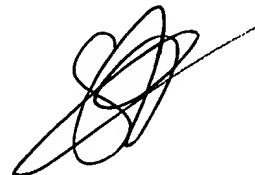
10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Duc T. Duong whose telephone number is 703-605-5146. The examiner can normally be reached on M-Th (8:30 AM-5:30 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau T. Nguyen can be reached on 703-308-5340. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DD

February 5, 2004



STEVEN H.D. NGUYEN
PRIMARY EXAMINER